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ABSTRACT

This third in a series of twenty-nine learning modules on instructional execution is designed to give secondary and postsecondary vocational teachers help in planning for and conducting three teaching techniques (brainstorming, buzz group, and question box techniques) which can create interest in learning and encourage student participation. The terminal objective for the module is to employ these techniques in an actual school situation. Introductory sections relate the competencies dealt with here to others in the program and list both the enabling objectives for the three learning experiences and the resources required. Materials in the learning experiences include required reading, self-check quizzes, model answers, case studies to critique, model critiques, and the teacher performance assessment form for use in evaluation of the terminal objective. (The modules on instructional execution are part of a larger series of 100 performance-based teacher education (PBTE) self-contained learning packages for use in preservice or inservice training of teachers in all occupational areas. Materials are designed for use by teachers, either on an individual or group basis, working under the direction of one or more resource persons/instructors.) (BM)

ED149067

MODULE

C-3

Employ Brainstorming, Buzz Group, and Question Box Techniques

MODULE C-3 OF CATEGORY C—INSTRUCTIONAL EXECUTION
PROFESSIONAL TEACHER EDUCATION MODULE SERIES

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The Ohio State University

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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CE 014 303

FOREWORD

This module is one of a series of 100 performance-based teacher education (PBTE) learning packages focusing upon specific professional competencies of vocational teachers. The competencies upon which these modules are based were identified and verified through research as being important to successful vocational teaching at both the secondary and post-secondary levels of instruction. The modules are suitable for the preparation of teachers in all occupational areas.

Each module provides learning experiences that integrate theory and application; each culminates with criterion referenced assessment of the teacher's performance of the specified competency. The materials are designed for use by individual or groups of teachers in training working under the direction and with the assistance of teacher educators acting as resource persons. Resource persons should be skilled in the teacher competency being developed and should be thoroughly oriented to PBTE concepts and procedures in using these materials.

The design of the materials provides considerable flexibility for planning and conducting performance-based preservice and inservice teacher preparation programs to meet a wide variety of individual needs and interests. The materials are intended for use by universities and colleges, state departments of education, post-secondary institutions, local education agencies, and others responsible for the professional development of vocational teachers. Further information about the use of the modules in teacher education programs is contained in three related documents: **Student Guide to Using Performance-Based Teacher Education Materials, Resource Person Guide to Using Performance-Based Teacher Education Materials** and **Guide to Implementation of Performance-Based Teacher Education.**

The PBTE curriculum packages are products of a sustained research and development effort by The Center's Program for Professional Development for Vocational Education. Many individuals, institutions, and agencies participated with The Center and have made contributions to the systematic development, testing, revision, and refinement of these very significant training materials. Over 40 teacher educators provided input in development of initial versions of the modules; over 2,000 teachers and 300 resource persons in 20 universities, colleges, and post-secondary institutions used the materials and provided feedback to The Center for revision and refinement.

Special recognition for major individual roles in the direction, development, coordination of testing, revision, and refinement of these materials is extended to the following program staff: James B. Hamilton, Program Director; Robert E. Norton, Associate Program Director; Glen E. Fardig, Specialist; Lois Harrington, Program Assistant; and Karen Quinn, Program Assistant. Recognition is also extended to Kristy Ross, Technical Assistant; Joan Jones, Technical Assistant; and Jean Wisenbaugh, Artist for their contributions to the final refinement of the materials. Contributions made by former program staff toward developmental versions of these materials are also acknowledged. Calvin J. Cotrell directed the vocational teacher competency research studies upon which these modules are based and also directed the curriculum development effort from 1971–1972. Curtis R. Finch provided leadership for the program from 1972–1974.

Appreciation is also extended to all those outside The Center (consultants, field site coordinators, teacher educators, teachers, and others) who contributed so generously in various phases of the total effort. Early versions of the materials were developed by The Center in cooperation with the vocational teacher education faculties at Oregon State University and at the University of Missouri-Columbia. Preliminary testing of the materials was conducted at Oregon State University, Temple University, and University of Missouri-Columbia.

Following preliminary testing, major revision of all materials was performed by Center Staff with the assistance of numerous consultants and visiting scholars from throughout the country.

Advanced testing of the materials was carried out with assistance of the vocational teacher educators and students of Central Washington State College; Colorado State University; Ferris State College, Michigan; Florida State University; Holland College, P.E.I., Canada; Oklahoma State University; Rutgers University; State University College at Buffalo; Temple University; University of Arizona; University of Michigan-Flint; University of Minnesota-Twin Cities; University of Nebraska-Lincoln; University of Northern Colorado; University of Pittsburgh; University of Tennessee; University of Vermont; and Utah State University.

The Center is grateful to the National Institute of Education for sponsorship of this PBTE curriculum development effort from 1972 through its completion. Appreciation is extended to the Bureau of Occupational and Adult Education of the U.S. Office of Education for their sponsorship of training and advanced testing of the materials at 10 sites under provisions of EPDA Part F, Section 553. Recognition of funding support of the advanced testing effort is also extended to Ferris State College, Holland College, Temple University, and the University of Michigan-Flint.

Robert E. Taylor
Director
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THE CENTER FOR VOCATIONAL EDUCATION
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The Center for Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning and preparation. The Center fulfills its mission by:

- Generating knowledge through research.
- Developing educational programs and products.
- Evaluating individual program needs and outcomes.
- Installing educational programs and products.
- Operating information systems and services.
- Conducting leadership development and training programs.

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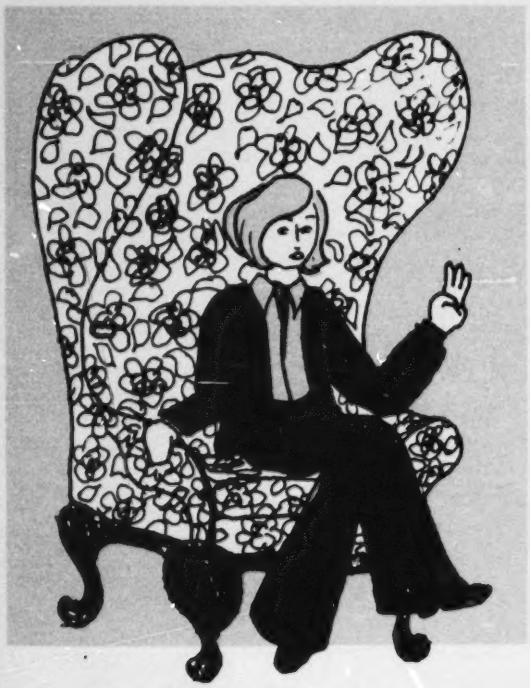
The American Association for Vocational Instructional Materials (AAVIM) is an interstate organization of universities, colleges and divisions of vocational education devoted to the improvement of teaching through better information and teaching aids.

INTRODUCTION

Stimulating the interest of students is of major importance in the teaching/learning process. Creating interest and actively involving students from the planning phase through the entire process affects the learning that takes place and the degree to which objectives are achieved.



Brainstorming, buzz group, and question box techniques are all effective devices for creating interest and securing the active participation of all, or at least most, class members. These techniques are also relatively easy to implement in the classroom. **Brainstorming** is a technique in which group members offer spontaneous ideas or suggestions regarding a specific topic or concern. The **buzz group** is a technique used with small groups in which members actively discuss a particular topic or concern. The **question box technique** is used to obtain questions or types of responses anonymously from individual students.

The learning experiences in this module are designed to help you develop competency in using each of the three techniques—brainstorming, buzz group, and question box—to create interest in learning and encourage student participation.

ABOUT THIS MODULE

Objectives

Terminal Objective: In an actual school situation, employ brainstorming, buzz group, and question box techniques. Your performance will be assessed by your resource person, using the Teacher Performance Assessment Form, pp. 23–24 (*Learning Experience III*).

Enabling Objectives:

1. After completing the required reading, demonstrate knowledge of the purposes of, and the steps to follow in, using brainstorming, buzz group, and question box techniques (*Learning Experience I*).
2. Given case studies of teachers employing brainstorming, buzz group, and question box techniques, critique the performance of those teachers (*Learning Experience II*).

Prerequisites

To complete this module, you must have competency in developing a lesson plan. If you do not already have this competency, meet with your resource person to determine what method you will use to gain this skill. One option is to complete the information and practice activities in the following module:

- *Develop a Lesson Plan*, Module B–4

Resources

A list of the outside resources which supplement those contained within the module follows. Check with your resource person (1) to determine the availability and the location of these resources, (2) to locate additional references in your occupational specialty, and (3) to get assistance in setting up activities with peers or observations of skilled teachers, if necessary. Your resource person may also be contacted if you have any difficulty with directions, or in assessing your progress at any time.

Learning Experience I

Optional

Reference: Johnson, David W. and Frank P. Johnson. *Joining Together: Group Theory and Group Skills.* Englewood Cliffs, NJ: Prentice-Hall, Inc., 1975.

Locally-produced videotapes of teachers employing brainstorming, buzz group, and question box techniques which you can view for the purpose of critiquing each teacher's performance.

Videotape equipment for viewing videotapes of teachers employing brainstorming, buzz group, and question box techniques.

A group of peers with whom you can participate in group activities.

Learning Experience II

Optional

A group of peers to participate in a seminar in which you use brainstorming, buzz group, and question box techniques.

Organizations in which you can use brainstorming, buzz group, and question box techniques.

Learning Experience III

Required

An actual school situation in which you can employ brainstorming, buzz group, and question box techniques.

A resource person to assess your competency in employing brainstorming, buzz group, and question box techniques.

This module covers performance element numbers 82, 97, 98 from Calvin J. Cotrell *et al., Model Curricula for Vocational and Technical Education: Report No. V* (Columbus, OH: The Center of Vocational Education, The Ohio State University, 1972). The 384 elements in this document form the research base for all The Center's PBTE module development.

For information about the general organization of each module, general procedures for their use, and terminology which is common to all 100 modules, see About Using The Center's PBTE Modules on the inside back cover.

Learning Experience I

OVERVIEW

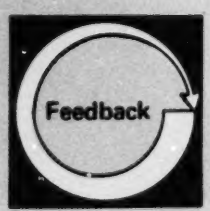
After completing the required reading, demonstrate knowledge of the purposes of, and steps to follow in, using brainstorming, buzz group, and question box techniques.

You will be reading the information sheet, Stimulating Learning through Brainstorming, Buzz Group, and Question Box Techniques, pp. 6–10.

You may wish to read the supplementary reference, Johnson and Johnson, *Joining Together: Group Theory and Group Skills*, and to complete the group activities discussed in each chapter with a group of your peers.

You may wish to view locally-produced videotapes of teachers employing brainstorming, buzz group, and question box techniques, and to critique the performance of those teachers.

You will be demonstrating knowledge of the purposes of, and steps to follow in, using brainstorming, buzz group, and question box techniques by completing the Self-Check, pp. 11–12.



You will be evaluating your competency by comparing your completed Self-Check with the Model Answers, pp. 13–14.

Activity

For information defining brainstorming, buzz group, and question box techniques and explaining the steps in planning and implementing these techniques, read the following information sheet:

STIMULATING LEARNING THROUGH BRAINSTORMING, BUZZ GROUP, AND QUESTION BOX TECHNIQUES

The teaching/learning techniques of brainstorming, buzz group, and question box are designed to stimulate or "get things going" with a group. As the vocational teacher, you may use these techniques to actively involve your students in the process of planning for topics or activities to be introduced in the classroom. This involvement can encourage your students to develop their creative thinking abilities and to be active participants in the classroom.

Brainstorming

Brainstorming is a technique used to stimulate creativity and promote the involvement of students in the learning situation. Often, it is used as a pre-planning technique. Students first generate alternative suggestions through brainstorming which you can then consider in planning learning activities. It is most effective when the group is not too large (12–15 is desirable) so there is ample opportunity for everyone to respond and participate in the short time (e.g., 10–15 minutes) usually allocated for the activity.

The brainstorming session should be guided by a leader. This person may be the teacher, or a student selected by the group members or by the teacher. In addition, a recorder must be chosen to fulfill the important responsibility of keeping a written record of the suggested alternatives.

When choosing a topic or concern for a brainstorming session, you should identify one that is specific. This will help to keep students' ideas or suggestions from covering too broad an area. In addition, you should be sure that the topic can be easily understood by students and that they will have the ability and interest to deal with it effectively.[1] Whatever topic you choose, it should be carefully described to students before the brainstorming session begins.

Evaluation and criticism are **not** allowed during brainstorming. Assessment of the ideas is done at a later time. All ideas related to the topic are welcomed. A variety of alternative suggestions will help to generate more effective plans of action. Because a quantity of varied suggestions is desired, participants are requested to give spontaneous responses without weighing their value at that time. This technique is also known as a "popcorn session" as participants are encouraged to keep the ideas popping steadily during the allocated time.

Students need to be oriented to the brainstorming process if it is to be productive. You should explain the purpose of brainstorming and how a typical session operates. Perhaps you could put students through a "dry run" so they could get the feel of how brainstorming works. This "dry run" could also alert students to possible pitfalls. For

1. To gain skill in identifying students' abilities and interests, you may wish to refer to Module B–1, *Determine Needs and Interests of Students.*

example, students could be made aware of the mistakes of groaning audibly when a suggestion is made or of asking classmates whether they found their ideas in a crackerjack box.

The leader has the responsibility for monitoring the actual brainstorming session. The leader should stay in the background as much as possible, but should interject ideas to stimulate thinking and keep the responses coming, if necessary. He/she must take care that negative or evaluative phrases are kept at a minimum. If you are not the leader, you should make certain that the student chosen as leader encourages a spontaneous flow of suggestions and discourages value judgments about any idea put forth.

Adequate orientation of students to the brainstorming process can help ensure that the session does not get out of hand. It will help to ensure that (1) students take their task seriously (2) students do not confuse spontaneity with silliness, and (3) a few students do not dominate the session. If, during the actual session, all the ideas seem to be coming from a few students, an expectant or encouraging glance at the quieter students may be enough to get them talking.

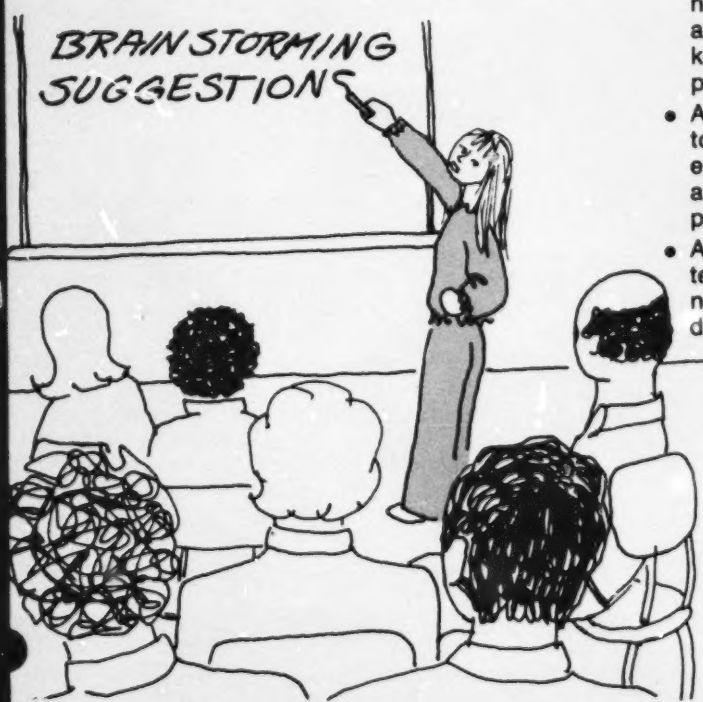
The recorder, who is selected by the teacher or the students, has an important and active role in keeping a written record of all suggestions made during the brainstorming session. This record is usually written on the chalkboard so that all can see, and so memory won't have to be relied on when the evaluation process begins at a later time.

After closing the brainstorming session at the pre-arranged time, the teacher should arrange for the recorder to report on the suggestions made. The reporting can be done orally at the close of the session; a report can be submitted in writing at a later time; or, the report can be delivered using a combination of both methods.

Although the brainstorming technique has limitations, these can be avoided by carefully planning and conducting each session. The productivity of the session (in terms of involvement of students and quality of alternatives generated) depends on how well participants have been oriented to the process and to the topic to be considered. Even though the generating of alternative ideas is an objective of a brainstorming session, the stimulating effects it has on participants is often equal to, or even more important than, the ideas produced.

Brainstorming can be used in any vocational course. For example:

- A business and office education teacher could use brainstorming to involve students in suggesting alternatives for solving the noise problem in the simulated office situation.
- A trade and industrial cooperative education teacher could use the brainstorming technique to stimulate students to think about, and contribute alternative suggestions for, keeping daily records of their on-the-job experiences.
- A carpentry teacher might use brainstorming to involve students in suggesting ways to ensure that their equipment and materials are not left in the way of the electrician and plumbing classes.
- A home economics child care job training teacher could use the brainstorming technique to obtain ideas from students on rainy day play activities for children.



Buzz Group

One technique which is often used to stimulate student learning is the buzz group. This device was originally developed by Phillips and is often termed the "Phillips 66" method since it involves six minutes and a six–member group as defined by Phillips.

To increase involvement in discussion and obtain the benefit of everyone's ideas, the class may be divided into small groups of six (or some other small number). First, you should explain the specific question to be addressed by the groups and make certain that everyone understands what is to be discussed. If everyone does not understand before discussion begins, many problems can develop. For example, if students are uncertain whether they are to discuss **what** dress code regulations should be instituted at school, or **whether** schools should have the **right** to require certain dress, the groups may spend valuable time spinning their wheels. Most of the time may be spent deciding what to discuss, rather than dealing with the issue itself. The topic that is chosen must be limited so that all aspects can be adequately explored. It must also be simple enough that students do not become discouraged in trying to discuss it in so short a time.

You should select or ask each group to select a leader and a recorder. Taking the responsibility for designating competent leaders and recorders can be a valuable learning experience for students, but there may be occasions when you should step in. For example, you may have students in your class who are never chosen as leaders. You may wish to intervene in order to give these students the opportunity to develop leadership potential or speak before a group.

Students should have been oriented beforehand to the responsibilities of the leader and recorder. With the aid of this knowledge, the leader can make sure that the group sticks to the topic and that all groups members participate. In addition, the recorder will understand the importance of keeping accurate written records of key items discussed and decisions reached, and of reporting this information to the total group.

The discussion or "buzzing" should proceed for the short period of time previously designated. The leader should encourage less aggressive individuals to join in the discussion, so that a few highly verbal students do not control the discussion and prevent good group interaction. While the discussion proceeds, you should monitor the progress being made in each buzz group by circulating among the groups. If necessary, you should encourage the leaders with a word or a nod to seek the participation of all members of the groups or to bring the discussion back on target. After you close the session, you should ask each recorder to summarize the discussion of the small group for the entire class.

The buzz group is a good method to use to encourage individual participation and creative thinking by each student and to promote interaction among students. The technique is appropriate for any vocational classroom. For example:

- Ms. Blossom used the buzz group technique in a family living class to stimulate interest and active involvement of students in exploring and discussing differing family life styles. She found more of the students willing to discuss the topic in small groups than in a large-group situation.
- Gene Green, FFA president, used the buzz group technique effectively during an officer training program. A buzz group consisting of a past local officer, regional or state officer, parent or advisor, and the in-coming officer discussed the responsibilities of each officer.
- Mr. Piper used the buzz group technique in his trade and industrial cooperative education class to let students explore and discuss on-the-job work experiences desirable for different occupations.

Question Box

The question box is an interest-stimulating technique with more possible applications than is generally realized. It is a relatively easy-to-use device which a creative teacher can vary to fit differing situations. For this technique, students are encouraged to submit written questions or specified types of responses on a certain topic or concern.

Students are encouraged to put their questions or responses in writing and place them in a certain location (sometimes a box, from which the technique derived its name) by a specified time. This technique is especially useful when you wish to generate questions for discussion at a later time, class time is limited, or students need time to consider their questions and/or responses.

In addition, the question box technique allows students to make anonymous contributions if they desire; they need not feel embarrassed about their suggestions or about speaking in front of the group. At the specified time, the responses are collected and organized for use.

When using the question box technique, it is important that students understand **why** they are submitting questions (i.e., what objectives the technique is helping them achieve) and **what** they are to do. If not properly oriented, students may not respond at all, or may submit irrelevant questions that do not deal with the topic. Students may also submit serious but off-target responses if they were not adequately oriented. For example, they may submit **statements** of their opinion when what you wanted were **questions** to be asked a resource person.

The following three variations of the question box technique may be used effectively in the classroom:

- Questions to be answered may be obtained from students pertaining to a topic that will be discussed by a resource person or other subject matter experts. The questions may be organized and presented to the resource person in advance of the visit so he/she can plan effectively to meet students' needs.
- Students may be encouraged to submit their viewpoints on a controversial subject and place them anonymously in a box. These viewpoints may be summarized and used as a starting point for discussions.
- Students may be encouraged to place their responses in one or two boxes, one stipulated as "pro" and one as "con," or some other such designation. This makes tabulation easier and encourages the student to do some thinking and decision-making before responding.

Choosing a Technique

Before you decide on the specific technique to use to stimulate the learning process, you need to consider your objectives and your students' needs and interests. The buzz group technique, for example, could be used to encourage student discussion and evaluation of alternatives for the yearly program of activities of the student vocational organization.

But, if students are unaware of all the possible alternatives, it might be better to start with a brainstorming session, in which many alternatives are generated in a short period of time, and an idea presented by one student may stimulate the creative juices in other students.

If you wish to generate ideas about a topic at the beginning of the school year before students have had time to feel comfortable with one another, the brainstorming technique might not be the best choice. Perhaps the question box technique, in which students submit ideas anonymously and can jot these ideas down on their own time, would be a better choice.

The important thing to remember is that the technique you choose should in some way help to achieve the lesson objectives(s) (e.g., not just be a time-filler) and should fit your particular classroom situation.

You may wish to read Johnson and Johnson, *Joining Together: Group Theory and Group Skills*, to gain further information on effective interaction, leadership, and decision-making skills, and techniques for improving group communication. You could choose to read those chapters that are particularly relevant to you, and then to meet with a group of peers to complete the group activities suggested at the end of each chapter.

Your institution may have available videotapes showing examples of teachers employing brainstorming, buzz group, and question box techniques. If so, you may wish to view one or more of these videotapes. You might also choose to critique the performance of each teacher in employing these techniques, using the criteria provided in this module, or critique forms or checklists provided by your resource person.

The following items check your comprehension of the material in the information sheet, Stimulating Learning through Brainstorming, Buzz Group, and Question Box Techniques, pp. 6–10. Each of the four items requires a short essay-type response. Please explain fully, but briefly, and make sure you respond to all parts of each item.

SELF-CHECK

1. If the statement "Involvement of the learner in the planning is half the learning process" is true, what implications does this have for the use of brainstorming, buzz group, and question box techniques?

2. What influence can brainstorming, buzz group, and question box techniques have on the classroom learning enrivonment?

3. If brainstorming, buzz group, and question box techniques are so stimulating, why shouldn't a teacher use at least one of them during every class?

4. Describe the advantages and disadvantages of each of the three techniques and measures that can be taken to prevent or overcome the disadvantages.

Compare your written responses on the Self-Check with the Model Answers given below. Your responses need not exactly duplicate the model responses; however, you should have covered the same **major** points.

MODEL ANSWERS

1. When students can be stimulated early to become actively involved in the planning process—as is possible through the use of the brainstorming, buzz group, and question box techniques—they feel an interest in, and commitment to, carrying through on the planned activity. This helps alleviate the feeling that the plans, activities, and entire learning process is being imposed by the teacher. Remember, too, that planning in itself is a learning process.

2. Each of the techniques can promote the creation of a stimulating learning environment. If well conducted, the students should feel involved and should actively use their thought processes. Each technique has the potential for preventing or alleviating discipline problems since these techniques can prevent boredom in students.

3. As with any other teaching technique, each of these must be used in the correct way for a specific purpose (i.e., to help meet lesson objectives) to be most effective. Overuse of any technique tends to cause it to lose its effectiveness. In addition, different students are stimulated in different ways, just as they learn in different ways. A certain teaching technique may be more effective with some groups than with others and will be more effective with the same group at some times than at others.

4. **Brainstorming**

   Advantages:

   a. It is a peppy, pre-planning technique.
   b. It involves students in thinking creatively about a topic.
   c. No evaluation of responses is allowed so everyone's ideas are considered.

   Disadvantages and Preventative Measures:

   a. • Unless the setting is established correctly, it can get out of hand.
      • By establishing early the importance of the topic and the technique, the process is less likely to "get out of hand" as the spontaneous responses are submitted.
   b. • Productivity may be questionable at times.
      • When students are properly oriented and the topic is applicable to their abilities and interests, generation of alternative ideas more likely will be high.
   c. • Some students may tend to dominate the activity.
      • Leader needs to make a conscious effort to obtain a contribution from each member of the group, not just a few.

   Buzz Group

   Advantages:

   a. Everyone has a chance to get involved in a small group.
   b. A greater number of key ideas can be developed and discussed in the various groups.
   c. It develops leadership ability in students.

   Disadvantages and Preventative Measures:

   a. • Valuable information may not be shared with entire group.
      • The recorders must be guided in keeping accurate written records of the key items discussed and the decisions reached within the group. Time must be provided for sharing this information with the entire class or group.
   b. • Members of a group may not stick to the topic and may just waste time.
      • The teacher must be actively involved in monitoring the progress being made by the groups. Guidance must be given if the leader is experiencing difficulty in keeping the group on the topic.
   c. • Aggressive students may monopolize the discussion.
      • The leader must continuously try to obtain participation by all group members. The teacher may need to assist some leaders in this.
   d. • Same student may assume leadership responsibilities, thus, giving no opportunity to others.

- The teacher must be aware of the groups' organization and see that leadership responsibilities are passed around and not limited to a few of the students.

Question Box

Advantages:

a. Everyone has a chance to raise a question.
b. Questioner may remain anonymous so students should not fear asking questions.
c. Gives students time to generate questions to establish a basis for discussion.

Disadvantages and Preventative Measures:

a. • Unless purpose is established, students may not respond.
   • Teacher or leader must enthusiastically provide the "setting" for use of the technique and clarify any misunderstandings concerning the process to be followed.
b. • The mechanics may be too complicated to get good student response.
   • The steps in the process for the technique must be kept as simple as possible and explained fully to students.
c. • Students may not take it seriously and may submit irrelevant questions.
   • The students must be made aware of the importance of the topic and the technique in order for relevant responses to be obtained.

LEVEL OF PERFORMANCE: Your completed Self-Check should have covered the same **major** points as the model responses. If you missed some points or have questions about any additional points you made, review the material in the information sheet, Stimulating Learning through Brainstorming, Buzz Group, and Question Box Techniques, pp. 6–10, or check with your resource person if necessary.

Learning Experience II

OVERVIEW

Given case studies of teachers employing brainstorming, buzz group, and question box techniques, critique the performance of those teachers.

You will be reading the Case Studies, pp. 16–18, and writing critiques of the performance of the teachers described.

You will be evaluating your competency in critiquing the teachers' performance in using brainstorming, buzz group, and question box techniques by comparing your completed critiques with the Model Critiques, p. 19.

You may wish to use brainstorming, buzz group, and question box techniques in a seminar-type situation with peers.

You may wish to use brainstorming, buzz group, and question box techniques as appropriate situations arise in organizations other than the classroom.

The following Case Studies describe how three vocational teachers used brainstorming, buzz group, and question box techniques in their classes. Each case study is followed by a series of key questions relative to the teacher's performance. Read each case study, and critique it in writing using the questions as guides, and keeping in mind the material in the information sheet, Stimulating Learning through Brainstorming, Buzz Group, and Question Box Techniques, pp. 6–10.

CASE STUDIES

Case Study 1: Brainstorming

One day when there was some extra time, Ms. Ditman explained to her cooperative education class that over the past several years her class had sponsored a formal banquet to express their appreciation for the employers who had supported the program. Some suggestions had been made that another kind of event be sponsored.

Different suggestions had been made, but there was the possibility that many more ideas should be explored. Ms. Ditman explained that they would brainstorm to obtain more ideas. Complete silence ensued.

Ms. Ditman again asked for ideas for another kind of employer appreciation event and John responded, "Let's buy tickets at the Dinner Playhouse and really have a big bash. The employers deserve it, and so do we."

Bill responded, "We can't do that. It would be much too expensive. And besides I'd rather use our money some other way than for all those employers."

Jane agreed with Bill and a heated discussion resulted among a few students on the pros and cons of John's suggestion.

Finally John said, "Well, if you don't like my idea, let's have some better ones," and the brainstorming continued until the bell rang.

During class the next day, Ms. Ditman announced that she had decided a picnic would be the "thing to do" and proceeded to assign committees for the work.

Was the brainstorming technique suitable for this particular situation? Did it help to meet lesson objectives? What did Ms. Ditman do that caused the technique to be effective or ineffective in this situation? What could she have done to improve her use of the technique?

Case Study 2: Buzz Group

One Friday, Mr. Perez started class off by saying, "Class, I'm sure you're as tired as I am of lectures, so today I'm going to ignore my lesson plan and we are going to try something different called the buzz group. You'll each get to talk more if we break up into small groups for discussions. First, I'll give you 20 minutes to read today's text assignment. Then, you'll divide into four groups and discuss what you've read for 20 minutes. I'm going to be busy grading your test papers from yesterday, so please don't disturb me. I will call time in 20 minutes and then give you Monday's assignment."

Was the buzz group technique suitable for this particular situation? Did it help to meet lesson objectives? What did Mr. Perez do that caused the technique to be effective or ineffective in this situation? What could he have done to improve his use of the technique?

Case Study 3: Question Box

The members of the Job Training Food Service class had expressed a need to know more about good health and grooming habits, especially for their on-the-job training experience. However, they seemed a bit hesitant and embarrassed to ask questions about their concerns. Ms. Hillman proposed that they consider using the question box technique. She explained to them that they could then pose their questions anonymously in written form and deposit them by the end of the week in the file box on her desk.

Ms. Hillman asked if they would like to invite a resource person in to answer their questions. After a short brainstorming session during which they generated a list of possible resource persons, it was decided that a panel of three would be invited.

Ms. Hillman asked Jim, the class secretary, to tabulate the questions submitted in the file box at the end of the week, and to give a copy of the list to each panel member as soon as he or she accepted the invitation to come to the class.

Was the question box technique suitable for this particular situation? Did it help to meet lesson objectives? What did Ms. Hillman do that caused the technique to be effective or ineffective in this situation? What could she have done to improve her use of the technique?

Compare your completed written critiques of the Case Studies with the Model Critiques given below. Your responses need not exactly duplicate the model responses; however, you should have covered the same **major** points.

MODEL CRITIQUES

Case Study 1: Brainstorming

Brainstorming, handled properly, **could** have worked well in this situation. However, Ms. Ditman did not plan ahead to use the technique. She threw it in when she had extra time to kill. She did not explain to the students how to brainstorm. She did not appoint or ask for a volunteer to act as recorder. In addition, the brainstorming activity was unrelated to the other class activities and did not contribute to meeting any lesson objectives.

As a result, the activity had little chance of being productive. Since students did not know the rules governing brainstorming, it is no wonder that a heated discussion resulted. There was no leader to monitor the session, nor did Ms. Ditman interfere in the argument. Without planning and setting aside a certain time period for the activity, the bell rang before the activity was completed.

Finally, Ms. Ditman negated the entire activity by ignoring students' suggestions and making the decision on her own. This could inhibit their willingness to participate fully in other activities Ms. Ditman suggests in the future.

Case Study 2: Buzz Group

The reason Mr. Perez gave for using the buzz group technique—"I'm sure you're as tired as I am of lectures"—was, by itself, a poor reason for the selection. It is difficult to know whether the buzz group would have been a suitable selection since we don't know what they're reading or discussing. But, in general, this type of activity would lend itself to the use of the buzz group.

Mr. Perez failed to "set the stage" adequately for the technique. He did not clarify any objectives for the reading assignment nor the buzz discussions, so the students had no direction or guidance in either activity. In addition, no leaders or recorders were appointed. Mr. Perez isolated himself by grading papers and, thus, did not monitor the progress of the buzz groups. Therefore, he had no idea if the buzz groups were helping students to learn or even if students knew what they were to do in the groups.

The only directions given were "You'll divide into four groups" (which may or may not have been of desirable size) "and you'll discuss what you read for 20 minutes." This was too long a "buzzing" time, especially without objectives or monitoring. Afterwards, the ideas discussed in each group were not shared with the total group.

Case Study 3: Question Box

Ms. Hillman selected the question box technique wisely and carried it out effectively. When she sensed a need for the use of the question box technique because the students seemed embarrassed to ask questions about the topic, she proposed rather than required the use of the technique. In addition, she explained the purpose of the technique (students could pose their questions anonymously) and described exactly how the process would operate.

Ms. Hillman combined the use of two techniques (question box and brainstorming) effectively to promote the attainment of objectives and to encourage student involvement. She also made a wise choice, and probably reinforced student involvement, by giving to a class officer the responsibility of collecting and tabulating the questions in preparation for the resource person.

LEVEL OF PERFORMANCE: Your completed critiques should have covered the same **major** points as the model responses. If you missed some points or have questions about any additional points you made, review the material in the information sheet, Stimulating Learning Through Brainstorming, Buzz-Group, and Question Box Techniques, pp. 6–10, or check with your resource person if necessary.

You may wish to arrange a seminar-type situation with a group of peers. In this situation, you could use the brainstorming technique to identify ways of using brainstorming, buzz group, and question box techniques in your occupational specialty. You might also wish to use the buzz group technique to further explore the alternative suggestions generated in the brainstorming session. The question box technique could be used to obtain responses from peers, other than those attending the seminar, on the same topic.

Be alert for situations in organizations other than the classroom, such as 4–H and church groups, in which the use of brainstorming, buzz group, and question box techniques would be appropriate. You may wish to use one or more of the techniques with members of these organizations.

Learning Experience III

FINAL EXPERIENCE

In an **actual school situation,*** employ brainstorming, buzz group, and question box techniques.

Activity

As you plan your lessons, decide when brainstorming, buzz group, and question box techniques could be used effectively to aid in meeting the lesson objectives. Based on those decisions, employ brainstorming, buzz group, and question box techniques. This will include—

- selecting, modifying, or developing one or more lesson plans which include the use of each technique
- orienting students to the purpose and use of each technique
- encouraging student participation
- monitoring or guiding student progress during the use of each technique

NOTE: Due to the nature of this experience, you will need to have access to an actual school situation over an extended period of time (e.g., four to six weeks).

As you complete each of the above activities, document your actions (in writing, on tape, through a log) for assessment purposes.

Your resource person may want you to submit your written lesson plans to him/her for evaluation before you present your lessons. It may be helpful for your resource person to use the TPAF from Module B–4, *Develop a Lesson Plan*, to guide his/her evaluation.

Arrange in advance to have your resource person review your documentation and observe your lessons.

Your total competency will be assessed by your resource person, using the Teacher Performance Assessment Form, pp. 23–24.

Based upon the criteria specified in this assessment instrument, your resource person will determine whether you are competent in employing brainstorming, buzz group, and question box techniques.

*For a definition of "actual school situation," see the inside back cover.

NOTES

TEACHER PERFORMANCE ASSESSMENT FORM

Employ Brainstorming, Buzz Group, and Question Box Techniques (C–3)

Directions: Indicate the level of the teacher's accomplishment by placing an X in the appropriate box under the LEVEL OF PERFORMANCE heading. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

LEVEL OF PERFORMANCE

	N/A	None	Poor	Fair	Good	Excellent
Brainstorming						
The teacher:						
1. determined that the brainstorming technique would contribute to the achievement of the lesson objective(s) ..	☐	☐	☐	☐	☐	☐
2. planned the use of brainstorming as an integral part of the lesson	☐	☐	☐	☐	☐	☐
3. explained the purpose and process of brainstorming .	☐	☐	☐	☐	☐	☐
4. clarified the topic or concern	☐	☐	☐	☐	☐	☐
5. selected or asked students to select a leader for the brainstorming session	☐	☐	☐	☐	☐	☐
6. selected a student or asked a student to volunteer to record the ideas presented	☐	☐	☐	☐	☐	☐
7. encouraged student contribution of spontaneous alternative ideas	☐	☐	☐	☐	☐	☐
8. closed the session at the pre-arranged time	☐	☐	☐	☐	☐	☐
9. arranged for the recorder to report, orally and/or in writing	☐	☐	☐	☐	☐	☐

	N/A	None	Poor	Fair	Good	Excellent
Buzz Group						
The teacher:						
10. determined that use of the buzz group technique would contribute to the achievement of the lesson objective(s).	☐	☐	☐	☐	☐	☐
11. planned the use of the buzz group technique as an integral part of the lesson	☐	☐	☐	☐	☐	☐
12. explained the purpose and process of the buzz group technique	☐	☐	☐	☐	☐	☐
13. clarified the topic or concern	☐	☐	☐	☐	☐	☐
14. divided the students into small groups	☐	☐	☐	☐	☐	☐
15. selected group leaders or asked each group to select a leader	☐	☐	☐	☐	☐	☐
16. selected group recorders or asked each group to select a recorder	☐	☐	☐	☐	☐	☐
17. encouraged each leader to seek participation of all members of the buzz group	☐	☐	☐	☐	☐	☐
18. monitored progress made in each buzz group	☐	☐	☐	☐	☐	☐
19. closed the discussions at the prearranged time	☐	☐	☐	☐	☐	☐
20. asked each recorder to report to the entire class	☐	☐	☐	☐	☐	☐
Question Box						
The teacher:						
21. determined that the use of the question box technique would contribute to the achievement of the lesson objective(s)	☐	☐	☐	☐	☐	☐
22. planned the use of the question box technique as an integral part of the lesson	☐	☐	☐	☐	☐	☐
23. explained the purpose and process of the question box technique	☐	☐	☐	☐	☐	☐
24. clarified the topic or concern	☐	☐	☐	☐	☐	☐
25. specified a time and place for questions to be submitted	☐	☐	☐	☐	☐	☐
26. encouraged students to write and submit questions and responses	☐	☐	☐	☐	☐	☐
27. organized the collection and tabulation of responses	☐	☐	☐	☐	☐	☐

LEVEL OF PERFORMANCE: All items must receive N/A, GOOD, or EXCELLENT responses. If any item receives a NONE, POOR, or FAIR response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

ABOUT USING THE CENTER'S PBTE MODULES

Organization

Each module is designed to help you gain competency in a particular skill area considered important to teaching success. A module is made up of a series of learning experiences, some providing background information, some providing practice experiences, and others combining these two functions. Completing these experiences should **enable** you to achieve the **terminal** objective in the final learning experience. The final experience in each module always requires you to demonstrate the skill in an actual school situation when you are an intern, a student teacher, or an inservice teacher.

Procedures

Modules are designed to allow you to individualize your teacher education program. You need to take only those modules covering skills which you do not already possess. Similarly, you need not complete any learning experience within a module if you already have the skill needed to complete it. Therefore, before taking any module, you should carefully review (1) the Introduction, (2) the Objectives listed on p. 4, (3) the Overviews preceding each learning experience, and (4) the Final Experience. After comparing your present needs and competencies with the information you have read in these sections, you should be ready to make one of the following decisions:

- that you do not have the competencies indicated, and should complete the entire module
- that you are competent in one or more of the enabling objectives leading to the final learning experience, and thus can omit that (those) learning experience(s)
- that you are already competent in this area, and ready to complete the final learning experience in order to "test out"
- that the module is inappropriate to your needs at this time

When you are ready to take the final learning experience **and** have access to an actual school situation, make the necessary arrangements with your resource person. If you do not complete the final experience successfully, meet with your resource person and arrange (1) to repeat the experience, or (2) complete (or review) previous sections of the module or other related activities suggested by your resource person before attempting to repeat the final experience.

Options for recycling are also available in each of the learning experiences preceding the final experience. Any time you do not meet the minimum level of performance required to meet an objective, you and your resource person may meet to select activities to help you reach competency. This could involve (1) completing parts of the module previously skipped; (2) repeating activities; (3) reading supplementary resources or completing additional activities suggested by the resource person; (4) designing your own learning experience; or (5) completing some other activity suggested by you or your resource person.

Terminology

Actual School Situation . . . refers to a situation in which you are actually working with, and responsible for, secondary or post-secondary vocational students in a real school. An intern, a student teacher, or an inservice teacher would be functioning in an actual school situation. If you do **not** have access to an actual school situation when you are taking the module, you can complete the module **up to** the final learning experience. You would then do the final learning experience later; i.e., when you have access to an actual school situation.

Alternate Activity or Feedback . . . refers to an item or feedback device which may **substitute** for required items which, due to special circumstances, you are unable to complete.

Occupational Specialty . . . refers to a specific area of preparation within a vocational service area (e.g., the service area Trade and Industrial Education includes occupational specialties such as automobile mechanics, welding, and electricity).

Optional Activity or Feedback . . . refers to an item which is not required, but which is designed to **supplement** and enrich the required items in a learning experience.

Resource Person . . . refers to the person in charge of your educational program; the professor, instructor, administrator, supervisor, or cooperating/supervising/classroom teacher who is guiding you in taking this module.

Student . . . refers to the person who is enrolled and receiving instruction in a secondary or post-secondary educational institution.

Vocational Service Area . . . refers to a major vocational field: agricultural education, business and office education, distributive education, health occupations education, home economics education, industrial arts education, technical education, or trade and industrial education.

You or the Teacher . . . refers to the person who is taking the module.

Levels of Performance for Final Assessment

N/A . . . The criterion was not met because it was **not applicable** to the situation.
None . . . **No attempt** was made to meet the criterion, although it was relevent.
Poor . . . The teacher is unable to perform this skill or has only **very limited ability** to perform it.
Fair . . . The teacher is unable to perform this skill in an acceptable manner, but has **some ability** to perform it.
Good . . . The teacher is able to perform this skill in an **effective** manner.
Excellent . . . The teacher is able to perform this skill in a **very effective** manner.

Titles of The Center's Performance-Based Teacher Education Modules

Category A: Program Planning, Development, and Evaluation

A-1 Prepare for a Community Survey
A-2 Conduct a Community Survey
A-3 Report the Findings of a Community Survey
A-4 Organize an Occupational Advisory Committee
A-5 Maintain an Occupational Advisory Committee
A-6 Develop Program Goals and Objectives
A-7 Conduct an Occupational Analysis
A-8 Develop a Course of Study
A-9 Develop Long-Range Program Plans
A-10 Conduct a Student Follow-Up Study
A-11 Evaluate Your Vocational Program

Category B: Instructional Planning

B-1 Determine Needs and Interests of Students
B-2 Develop Student Performance Objectives
B-3 Develop a Unit of Instruction
B-4 Develop a Lesson Plan
B-5 Select Student Instructional Materials
B-6 Prepare Teacher-Made Instructional Materials

Category C: Instructional Execution

C-1 Direct Field Trips
C-2 Conduct Group Discussions, Panel Discussions, and Symposiums
C-3 Employ Brainstorming, Buzz Group, and Question Box Techniques
C-4 Direct Students in Instructing Other Students
C-5 Employ Simulation Techniques
C-6 Guide Student Study
C-7 Direct Student Laboratory Experience
C-8 Direct Students in Applying Problem-Solving Techniques
C-9 Employ the Project Method
C-10 Introduce a Lesson
C-11 Summarize a Lesson
C-12 Employ Oral Questioning Techniques
C-13 Employ Reinforcement Techniques
C-14 Provide Instruction for Slower and More Capable Learners
C-15 Present an Illustrated Talk
C-16 Demonstrate a Manipulative Skill
C-17 Demonstrate a Concept or Principle
C-18 Individualize Instruction
C-19 Employ the Team Teaching Approach
C-20 Use Subject Matter Experts to Present Information
C-21 Prepare Bulletin Boards and Exhibits
C-22 Present Information with Models, Real Objects, and Flannel Boards
C-23 Present Information with Overhead and Opaque Materials
C-24 Present Information with Filmstrips and Slides
C-25 Present Information with Films
C-26 Present Information with Audio Recordings
C-27 Present Information with Televised and Videotaped Materials
C-28 Employ Programmed Instruction
C-29 Present Information with the Chalkboard and Flip Chart

Category D: Instructional Evaluation

D-1 Establish Student Performance Criteria
D-2 Assess Student Performance: Knowledge
D-3 Assess Student Performance: Attitudes
D-4 Assess Student Performance: Skills
D-5 Determine Student Grades
D-6 Evaluate Your Instructional Effectiveness

Category E: Instructional Management

E-1 Project Instructional Resource Needs
E-2 Manage Your Budgeting and Reporting Responsibilities
E-3 Arrange for Improvement of Your Vocational Facilities
E-4 Maintain a Filing System
E-5 Provide for Student Safety
E-6 Provide for the First Aid Needs of Students
E-7 Assist Students in Developing Self-Discipline
E-8 Organize the Vocational Laboratory
E-9 Manage the Vocational Laboratory

Category F: Guidance

F-1 Gather Student Data Using Formal Data-Collection Techniques
F-2 Gather Student Data Through Personal Contacts
F-3 Use Conferences to Help Meet Student Needs
F-4 Provide Information on Educational and Career Opportunities
F-5 Assist Students in Applying for Employment or Further Education

Category G: School-Community Relations

G-1 Develop a School-Community Relations Plan for Your Vocational Program
G-2 Give Presentations to Promote Your Vocational Program
G-3 Develop Brochures to Promote Your Vocational Program
G-4 Prepare Displays to Promote Your Vocational Program
G-5 Prepare News Releases and Articles Concerning Your Vocational Program
G-6 Arrange for Television and Radio Presentations Concerning Your Vocational Program
G-7 Conduct an Open House
G-8 Work with Members of the Community
G-9 Work with State and Local Educators
G-10 Obtain Feedback about Your Vocational Program

Category H: Student Vocational Organization

H-1 Develop a Personal Philosophy Concerning Student Vocational Organizations
H-2 Establish a Student Vocational Organization
H-3 Prepare Student Vocational Organization Members for Leadership Roles
H-4 Assist Student Vocational Organization Members in Developing and Financing a Yearly Program of Activities
H-5 Supervise Activities of the Student Vocational Organization
H-6 Guide Participation in Student Vocational Organization Contests

Category I: Professional Role and Development

I-1 Keep Up-to-Date Professionally
I-2 Serve Your Teaching Profession
I-3 Develop an Active Personal Philosophy of Education
I-4 Serve the School and Community
I-5 Obtain a Suitable Teaching Position
I-6 Provide Laboratory Experiences for Prospective Teachers
I-7 Plan the Student Teaching Experience
I-8 Supervise Student Teachers

Category J: Coordination of Cooperative Education

J-1 Establish Guidelines for Your Cooperative Vocational Program
J-2 Manage the Attendance, Transfers, and Terminations of Co-Op Students
J-3 Enroll Students in Your Co-Op Program
J-4 Secure Training Stations for Your Co-Op Program
J-5 Place Co-Op Students on the Job
J-6 Develop the Training Ability of On-the-Job Instructors
J-7 Coordinate On-the-Job Instruction
J-8 Evaluate Co-Op Students' On-the-Job Performance
J-9 Prepare for Students' Related Instruction
J-10 Supervise an Employer-Employee Appreciation Event

RELATED PUBLICATIONS

Student Guide to Using Performance-Based Teacher Education Materials
Resource Person Guide to Using Performance-Based Teacher Education Materials
Guide to the Implementation of Performance-Based Teacher Education

For information regarding availability and prices of these materials contact—

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